

### **REMARKS**

The Official Action mailed December 24, 2003, and the Advisory Action mailed May 7, 2004, have been received and their contents carefully noted. Filed concurrently herewith is a *Request for Two Month Extension of Time*, which extends the shortened statutory period for response to May 24, 2004. Accordingly, the Applicants respectfully submit that this response is being timely filed.

The Applicants note with appreciation the consideration of the Information Disclosure Statements filed on July 20, 2001, August 27, 2001, February 19, 2002, September 20, 2002, and April 17, 2003. With respect to the copy of sheet 1 of 2 of the IDS filed on July 20, 2001, considered by the Examiner on June 25, 2003, and attached to the Official Action mailed June 30, 2003, the Examiner's initials ("RB") appear next to U.S. Patent No. 4,986,213 to Yamazaki et al. and U.S. Patent No. 6,096,581 to Zhang et al. Although a line was not drawn between the Examiner's initials, it is understood by the Applicants that the Examiner has considered all of the references cited on sheet 1 of 2 of the IDS filed on July 20, 2001. A further Information Disclosure Statement is submitted herewith and consideration of this Information Disclosure Statement is respectfully requested.

Claims 1-56 are pending in the present application, of which claims 1-24 are independent. The independent claims have been amended to better recite the features of the present invention, and claims 4-6, 10-12, 16-18 and 30-56 have been amended to correct minor grammatical errors. For the reasons set forth in detail below, all claims are believed to be in condition for allowance. Favorable reconsideration is requested.

The Official Action rejects claims 1-6, 13-20, 25-27 and 30-32 as anticipated by U.S. Patent No. 5,529,937 to Zhang et al. The Applicants respectfully submit that an anticipation rejection cannot be maintained against the independent claims of the present invention, as amended.

As stated in MPEP § 2131, to establish an anticipation rejection, each and every element as set forth in the claim must be described either expressly or inherently in a

single prior art reference. Verdegaal Bros. v. Union Oil Co. of California, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987).

Claims 1-24 have been amended by adding a step of forming a gate insulating film on a semiconductor film after leveling a surface of the semiconductor film. Forming the gate insulating film after the leveling step is effective as an interface between the semiconductor film and the gate insulating film. Leveling the surface of the semiconductor film effectively serves to decrease levels of an interface between the semiconductor film and the gate insulating film formed later. On the other hand, Zhang does not teach that a surface of a semiconductor film is leveled, either explicitly or inherently. Although Zhang appears to disclose heat treatment in an ambient atmosphere containing hydrogen in a later process (column 17, lines 12-17), Zhang does not intend nor does it suggest forming a gate insulating film after leveling a surface of the semiconductor film. This is because Zhang discloses that a substrate "which passes all the above-referenced processes is annealed in a hydrogen atmosphere" (emphasis added, column 12, lines 49-51), and that annealing is performed in the ambient atmosphere containing hydrogen at the end and "a complementary semiconductor circuit of TFT is produced" (column 17, lines 12-17). Therefore, Zhang does not teach a step of forming a gate insulating film on a semiconductor film after leveling a surface of the semiconductor film, either explicitly or inherently.

Since Zhang does not teach all the elements of the independent claims, either explicitly or inherently, an anticipation rejection cannot be maintained. Accordingly, reconsideration and withdrawal of the rejections under 35 U.S.C. § 102 are in order and respectfully requested.

The Official Action rejects claims 21-24 and 53-56 as obvious based on the combination of Zhang and U.S. Patent No. 5,891,764 to Ishihara et al., claims 7-12, 28, 29 and 39-44 as obvious based on the combination of Zhang and Wolf et al., "Silicon

Processing for the VLSI Era: Volume 1: Process Technology," pages 198, 532-533, Lattice Press, 1986, and claims 33-38 and 45-52 as obvious based on Zhang.

Please incorporate the arguments above with respect to the deficiencies in Zhang. Zhang also does not teach or suggest a step of forming a gate insulating film on a semiconductor film after leveling a surface of the semiconductor film.

Ishihara and Wolf do not cure the deficiencies in Zhang. The Official Action relies on Ishihara to allegedly teach "a rectangle shaped laser beam" (page 3, Paper No. 1203) and on Wolf to allegedly teach that "it is common to remove silicon oxide using hydrofluoric acid" (page 4, *Id.*). Zhang, Ishihara and Wolf, either alone or in combination, do not teach or suggest a step of forming a gate insulating film on a semiconductor film after leveling a surface of the semiconductor film.

Since Zhang, Ishihara and Wolf do not teach or suggest all the claim limitations, a *prima facie* case of obviousness cannot be maintained. Accordingly, reconsideration and withdrawal of the rejection under 35 U.S.C. § 103(a) are in order and respectfully requested.

Should the Examiner believe that anything further would be desirable to place this application in better condition for allowance, the Examiner is invited to contact the Applicants' undersigned attorney at the telephone number listed below.

Respectfully submitted,



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